

“White Paper”: Implementing Scalar for Digital Humanities Multimodal Online Publishing: Editorial and Authorial Workflow in Collaboration with Presses, Archives, and Humanities Centers.

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Philip J. Ethington (Project Director)
Steven F. Anderson (Co Project Director)
Curtis Fletcher (Co Project Director)
Tara L. McPherson (Co Project Director)

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In this White Paper, we summarize the outcomes of our NEH-funded project to fully implement [Scalar](#), the online multimodal authoring and publishing platform for full production use by university presses, libraries and museums, research scholars, students, and the general public.

Thanks to this grant, we have launched [Scalar 2.5](#), described herein.

Here we discuss the goals and the actual achievements at the end of the grant period, which concluded on 30 November 2018. Included are links to the launch and [User's Guide](#) pages online.

0. Background and Project Goals

Scalar is an open-source online multimedia authoring platform for humanities scholarship developed by the Alliance for Networking Visual Culture (see scalar.usc.edu). Funded initially by the Mellon Foundation, and initially tested via a series of NEH Digital Humanities Summer Institutes, Scalar was released into open beta in spring 2013. A substantially-revised version of the reading interface was released in the first quarter of 2015. Scalar had gained widespread use and was ideally positioned for the goal of this project: to be fully implemented as a standard authoring and publishing tool.

With this NEH grant, we proposed to deliver three important workflow features that will facilitate the creation and publication of multimedia digital works within both established and emerging publishing genres:

Component 1: Editorial Review and Copyediting Workflow

The integration directly into the Scalar environment of full review, author revision, version-control, copyediting, and proofreading processes necessary for edited and peer-reviewed publications.

Component 2: Integration of Critical Commons as Scalar Video Repository

Enhanced integration of Scalar with our partner media archive Critical Commons to create a reliable and easy-to-use system for uploading and embedding image files and video clips while maximizing the protections of fair use for scholars and publishers.

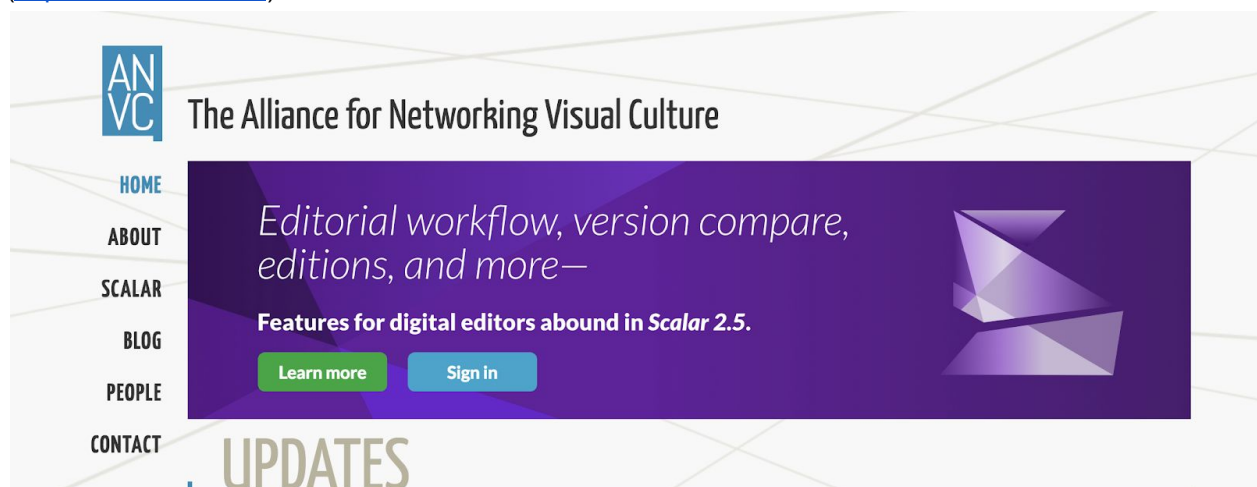
Component 3: Authoring Environment Upgrades

Continued improvements of our authoring environment to better leverage the enhanced features and look of Scalar's new reader interface towards scalable yet customizable publications. was finished during the no-cost extension year.

The need for all of these features emerged from our ongoing work with a network of partners, and we believed that they would be key to the continued uptake and spread of the platform.

With this NEH Implementation Grant, we successfully launched "Scalar 2.5":

Illustration: Launch of Scalar in December 2018, on the homepage of ANVC/Scalar
(<https://scalar.usc.edu>):



1. Accomplishments

Component 1: Editorial Review and Copyediting Workflow

Original objective: “The integration directly into the Scalar environment of full review, author revision, version-control, copyediting, and proofreading processes necessary for edited and peer-reviewed publications.”

Launch of Component 1, December 2018:

<https://scalar.me/anvc/all-new-editorial-workflow-features-debut-with-scalar-2-5/>

User’s Guide: <http://scalar.usc.edu/works/guide2/editorial-workflow>

Outcome: We are very happy with the performance and stability of the Editorial Review and Copyediting Workflow layer. It is functioning precisely as proposed, and has been field-tested by Stanford University press, the University of British Columbia Press (UBC), and other institutions, with strong positive feedback so far.

Component 2: Integration of Critical Commons as Scalar Video Repository

Enhanced integration of Scalar with our partner media archive Critical Commons to create a reliable and easy-to-use system for uploading and embedding image files and video clips while maximizing the protections of fair use for scholars and publishers.

Outcome: this feature was fully developed and worked as planned, however, after we launched the feature, an operating system upgrade to the Critical Commons platform broke the Scalar-CC linkage. We are fixing it currently and anticipate a restoration of the linkage by April 2019.

See User’s Guide: “Working with Widgets”

<http://scalar.usc.edu/works/guide2/working-with-widgets>

Component 3: Authoring Environment Upgrades

Original objective: Continued improvements of our authoring environment to better leverage the enhanced features and look of Scalar’s new reader interface towards scalable yet customizable publications.

Launch of Component 3 (widgets), May 2017:

<https://scalar.me/anvc/scalar-just-got-widgetized/>

Launch of Component 3 (path & context navigation system), August 2017:

<https://scalar.me/anvc/scalars-new-path-context-navigation-system/>

Launch of Component 3 (dashboard), December 2018:

<https://scalar.me/anvc/dashboard-update-brings-new-look-and-new-features/>

Outcome: These widgets have been in wide use now for almost two years, and have not had any bug reports, so we believe that they are quite successful.

2. Audiences

Scalar has both institutional and individual audiences. It has become a favored digital humanities platform among libraries, especially university libraries, and some museums. It is also very popular among college and university instructors, who use Scalar for student project assignments and collaborative work. Individual scholars and writers, mostly affiliated with colleges and universities, are the other broad category of Scalar's audiences. It is important to note that Scalar, an open-source platform, is not only installed at USC, the home base for this project, but at many other institutions, including Stanford University, the University of British Columbia, and Brown University. Those institutions are certainly a major "audience" for this project, but the user data below is drawn only from USC's installation.

Speaking solely of the installation of Scalar that we maintain at USC (Dornsife College), there are now more than 30,000 registered users of Scalar. At the time of our project proposal in 2016, there were about 4,500. To protect the platform from misuse, we require that users receive a registration key from our team. At last count (2018), we approved from 400 to 500 new accounts per quarter. We do not collect demographic data on the users, but most have .edu email addresses, and our assessment from individual-level approvals is that the majority are college or university students, representing the same gender and age distributions of the United States student populations in a cross-section of public, private, R-1 universities, liberal arts colleges, and community colleges nationwide, mostly in the United States but also worldwide.

Also strongly represented among users of Scalar are college and university faculty, as a platform for their research, teaching, and scholarly publications. (You could say that these have always been our core users, and it is not surprising that many have adopted Scalar for classroom assignments.)

After academic faculty, librarians are the most visible category of users. As stated above, they represent their institutions, and implement Scalar for a wide range of library and archival projects.

Our original justification for adding the features to Scalar that were its principal objectives, was to improve Scalar's utility and applicability to serve a widening user-base. As our upgrades became functional components of the platform, we also held regular webinars (at three levels of expertise: beginner, intermediate, and advanced). Through blog posts, tweets, webinars, and

on-site workshops, we have steadily publicized the newest features that give authors more affordances, and make the affordances more intuitive and efficient.

As we have conducted this publicity and outreach, our total number of registered users has increased dramatically. At the time of our initial grant application in Sept 2016, we had 4,500 registered users. Today the number is greater than 30,000. Of course, we cannot prove that the publicity and outreach we did had a direct effect, nor that the features funded by this grant were directly responsible for that increased number of users. But, that is the result, and the feedback we have (see evaluation) supports our hypothesis that the continued expansion of Scalar's user base reflects its responsive development of features, functionality, and affordances that were demanded by the community of (mostly academic) online multimodal authors.

Our most innovative achievement under this grant has been the creation of a complete editorial and copyediting workflow environment that meets the highest standards and best procedural practices of the best university presses. Our most direct audience in this objective has been those very same university presses, who seek this very means of preparing born-digital, multimodal web-based scholarly works for publication under their imprimatur.

More widely, the following publications have been published using the Scalar platform in the last two years, from Bloomsbury, University of California, NYU, Temple, and University of Minnesota Presses.

Digital Monographs

[When Melodies Gather: Oral Art of the Mahra](#) (Stanford University Press)

[Restricted Access: Media, Disability, and the Politics of Participation](#) (NYU Press)

[Using Digital Humanities in the Classroom: A Practical Introduction for Teachers, Lecturers, and Students](#) (Bloomsbury Press)

Book Companions

[Why Busing Failed: Race, Media, and the National Resistance to School Desegregation](#) (UC Press)

[Installation Archive: A Capsule Aesthetic](#) (U. of Minnesota Press)

[Our Beloved bgKin: Remapping A New History of King Philip's War](#) (Yale. U. Press)

[Phantom Skies and Shifting Ground: Landscape, Culture, and Rephotography in Eadweard Muybridge's Illustrations of Central America](#) (Temple University Press)

3. Evaluation

Scalar's new editorial and review feature-set ("Component 1," of this grant) was built explicitly as a workflow for academic presses. For that reason, we asked two presses with whom we work closely, Stanford University the University of British Columbia, to test and evaluate the workflow. These testing cycles revealed a number of bugs, particularly in our track changes feature and

Editorial Path. Testing also surfaced some inadequate functionality within the overall workflow, gaps that might prove tricky for press editors reviewing and editing digital content within a Scalar project. Working with Stanford and UBC, we turned several of these gaps into feature requests, some of which we were able to deliver under this grant and others of which we have put on our development roadmap.

While a few of the requests were beyond the scope of the current grant (for instance, both Stanford and UBC underscored, in their reports, the inability of editors to attach author queries to individual blocks of text), we are exploring the possibility, partnering with a university press, of including a number of them into a grant proposal for the Mellon Foundation. While this weakness is a significant notch below the ideal functionality we had hoped for, it still allows fully-detailed copyediting and author queries. The ultimate challenge was to create a “track changes” system that mimicked what Microsoft Word © supplies, but in a completely different environment. Each of the “pages” in Scalar is not actually a “page” in the same sense as a word processing document. The contents of “page” reside in multiple databases, so the “state” of a page needed to be registered and tracked. The “state” of a paragraph could not be separated out. We believe that solutions can be found to this problem, but both Stanford and University of British Columbia Press are happy enough with the system as-is to have already begun working with it in their publications.

4. Continuation of the Project

The features delivered under this grant, and in particular, our new editorial workflow, have allowed the Scalar team to work more closely with academic presses, including Stanford University Press, and the University of British Columbia Press. Both presses will begin using the editorial workflow to review and copyedit Scalar books slated for publication over the next academic year (2019-2020).

We also imagine this workflow will be useful for librarians supporting digital scholarship on their campuses. The Scalar team will be hosting a five-day workshop, in June 2019, designed for librarians and others who occupy such support roles for born-digital scholarship and cutting-edge, collections-based digital pedagogy on their campus. The workshop will include basic and intermediate sessions in Scalar, as well as individual sessions devoted to our new editorial and copy-editing feature-set.

Finally, the new widgets funded under this grant have also made the platform much more attractive to students who wish to author multimodal projects that include interactive components. The rollout of these widgets coincided with a dramatic uptake of Scalar by students in college and K-12 courses and we plan to leverage this new community of users to grow the platform. What’s more, now that the underlying architecture for Scalar widgets is in place, we can readily add more page-level interactive components to satisfy the needs of

particular user groups (for example, a profile widget for use by students, or a collection finding-aid widget for use by librarians and archivists).

In April of 2018, the Scalar team also participated in a workshop called “Making Scholarly Digital Publications” at the Getty Research Institute. Organized by Tara McPherson and Curtis Fletcher, along with Harriette Hemmasi of Brown University Library and Greg Albers of the Getty Publications, this meeting brought together Principal Investigators from Manifold, Fulcrum, and Editoria, as well as members of the Stanford University Press’ Digital Publishing Initiative, in an effort to share results across platforms. We plan to continue coordination with as many platforms as possible and hopefully to develop close collaboration with the teams developing those platforms to build compatibility and interoperability across platforms and to share best practices.

5. Long Term Impact

Scalar is growing by many means. The installation that we maintain on servers at USC, which has more than 30,000 registered users, is just one of many installations of this open-source platform. While we are quite aware of at least 20 such institutional installations around the world (mostly in the USA), we actually have no way of knowing or tracking how many installations there are, nor how fast they are growing. Institutions regularly download and install the platform from Reclaimhosting.com and GitHub.com (<https://reclaimhosting.com/>; <https://github.com/anvc/scalar>).

It is impossible to predict what the long-term impact of Scalar might be, given that we have brought it into a very wide open-source global ecology. We ourselves continue to collaborate with other teams to obtain funding to expand its capacities and applications, but other institutions are doing the same thing without informing us, which is appropriate, but also indeterminate.

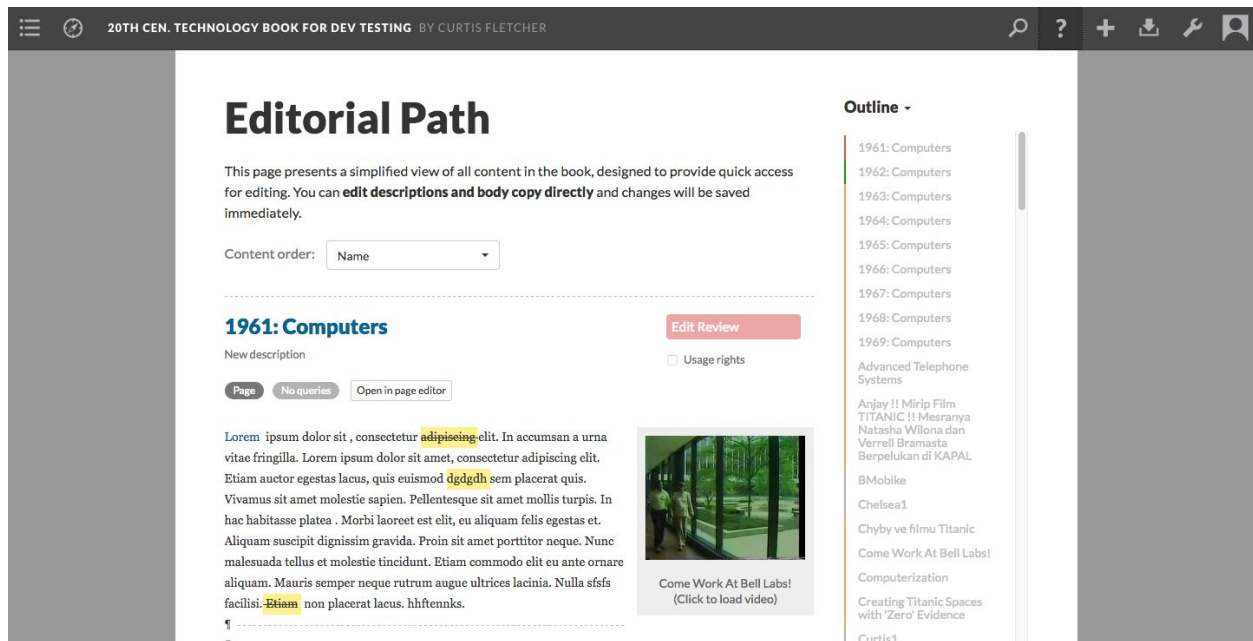
6. Award Products

The grant product is the implementation of the open-source Scalar platform, distributed via Reclaimhosting.com (<https://reclaimhosting.com/>) and GitHub.com (<https://github.com/anvc/scalar>).

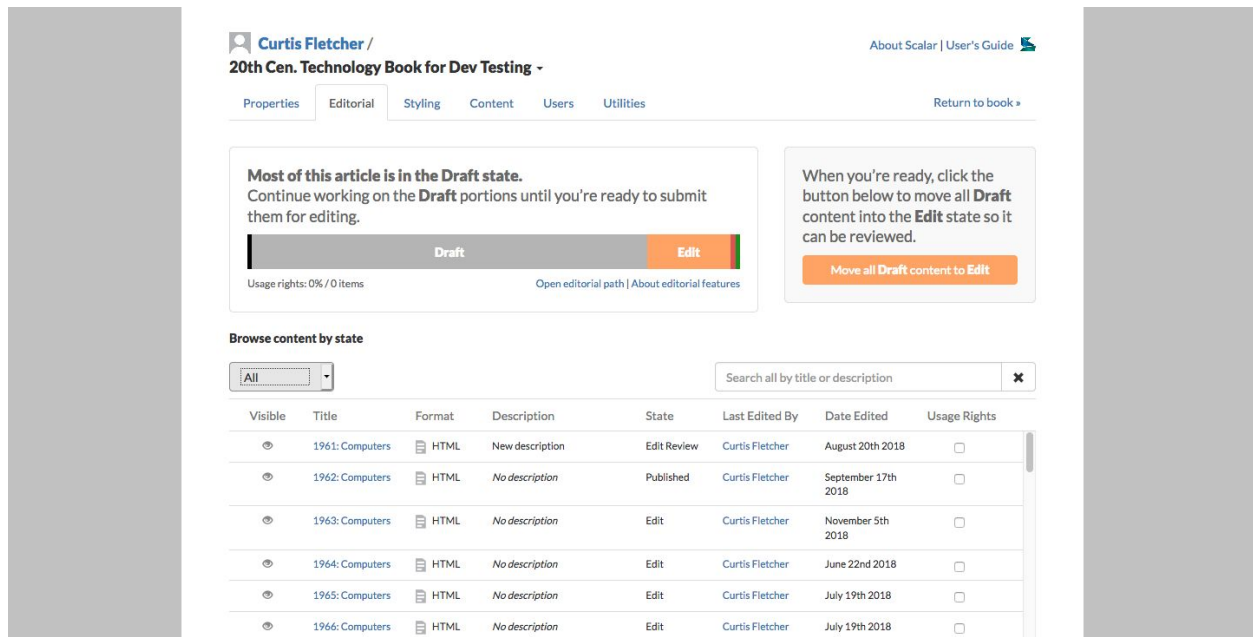
The platform is publicized by the [ANVC/Scalar website](#), blogs, and social media. It is also widely discussed on user community forums.

Appendices

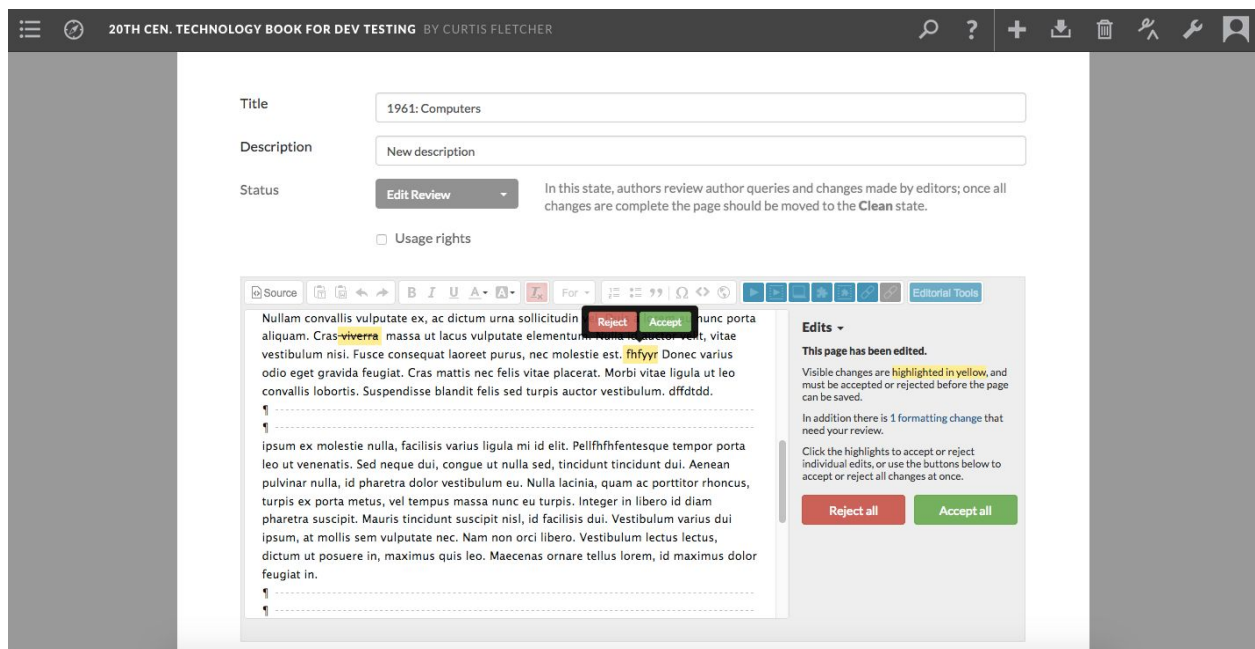
Appendix A: Screenshots of Component 1: Editorial Review and Copyediting Workflow



The Editorial Path is a simplified, text-centric view of the content of the entire book, designed to provide quick access for editing purposes. Editors simply scroll down to scan through the book's content, which is loaded on the fly as needed.



Dashboard's new Editorial tab contains tools for checking the editorial state of the book's content.



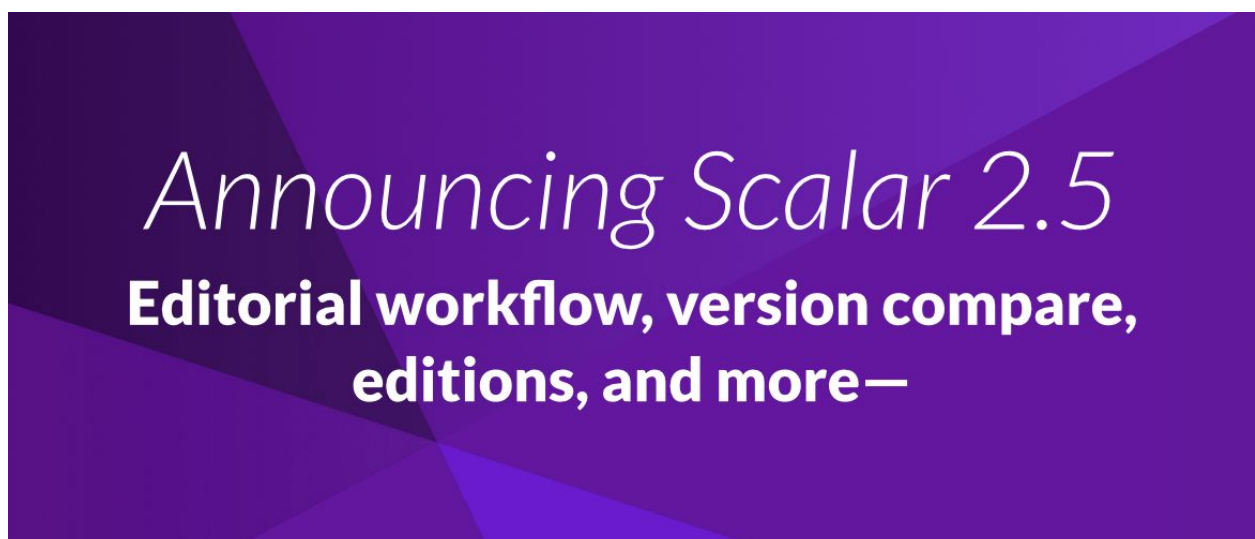
Page editor in “Edit Review” state. Author can individually accept or reject edits made by editor and respond to author queries.

This is the first page of the online introduction to the Editorial Path:

<https://scalar.me/anvc/all-new-editorial-workflow-features-debut-with-scalar-2-5/>

All new Editorial Workflow features debut with Scalar 2.5

January 22, 2019



Anyone who's edited a work of digital scholarship can tell you the task comes with a unique set of challenges. Some are practical ("How do I know if I've read the whole thing?") while others are philosophical ("How do we handle changes made after publication?"). With the release of Scalar 2.5, the Scalar platform gains a new set of Editorial Workflow features designed to make the process of preparing a Scalar project for publication easier for authors and editors alike. We're excited to share these new additions with you! We'll be covering specific aspects of the new Editorial Workflow in detail in future blog posts, but here's an overview of what's new:

This book is in the Published state.
Congratulations!

Published (100%)

Usage rights: 100%

Editorial Tab

You may have noticed that Scalar's new Dashboard includes an Editorial tab—which now includes the ability to activate the Editorial Workflow for a specific book. Once activated, the Editorial tab will become your headquarters for tracking the editorial review process. If you don't need the Editorial Workflow, do nothing and your Scalar books will continue to function as before.

Editor Role

Under the Users tab we've also added a new Editor user role to Scalar to facilitate the Editorial Workflow. Authors and Editors will have different permissions and will be prompted as to their respective tasks while they guide content through a six step process with multiple opportunities for review, revision, and comment.

Editorial Path

The Editorial Path is a new view in Scalar designed specifically to assist with the task of editing. It presents the complete content of a book in a scrolling format which can be sorted in several ways, helping ensure that nothing is missed. Inline editing allows authors to make text and media changes directly, without any need to navigate to individual pages. Search features and an outline view provide quick navigation throughout the book.



Version Compare

The Edit Page now includes an integrated Version Compare feature which highlights changes between individual versions. After an editor completes their review of a page, changes are automatically highlighted for the author, who is prompted to accept or reject the edits before proceeding.

Editions

By default, once a book passes through all six editorial phases to the Published stage, any future changes made by an author will go live immediately. Scalar's new Editions feature, however, makes it possible to "freeze" the text and metadata of a book at its current state as a named Edition. Future changes will be hidden from users until those changes have gone through the review process and are themselves published in a new Edition. Visitors will always be shown the latest edition by default, but can access past editions if desired. This is just an overview of the new Editorial Workflow features—for details, look to future blog posts or explore our [updated documentation](#). Our thanks the National Endowment for the Humanities for making these new additions possible.

Appendix B: Screenshots of Component 2: Integration of Critical Commons as Scalar Video Repository

The screenshot shows the 'Upload to Critical Commons' interface. At the top, there's a header bar with 'SCALAR 2 USER'S GUIDE' and navigation icons. The main form area is titled 'Upload to Critical Commons'. It includes a progress bar for 'Uploading att_1961.mp4' with a 'Cancel Upload' button. Below this are several input fields: 'Title' (AT&T Archives: Seeing the Digital Future), 'Media description' (AT&T industry film for 1961 Seattle World's Fair), 'Add thumbnail' (Browse... att_1961.jpg), 'Name of original media' (Challange of Change), 'Filmmaker/Creator' (AT&T), 'Year produced' (1961), 'Tags' (empty), 'Genre' (dropdown menu showing '--None--'), and 'Media distributor' (AT&T). At the bottom, there's a 'Commentary' section with a note: 'You must associate commentary with your media in order for it to be publically available.'

Critical Commons media uploader page.

Appendix C: Screenshots of Component 3: Authoring Environment Upgrades

The screenshot shows the 'Content' tab in the Scalar dashboard. The user is 'Curtis Fletcher' and the book is '20th Cen. Technology Book for Dev Testing'. The interface includes tabs for 'Properties', 'Editorial', 'Styling', 'Content' (selected), 'Users', and 'Utilities'. A search bar is present with the text 'Search pages by title or description'. Below this is a table with columns: 'Visible', 'Title', 'Description', 'Last Edited By', 'Date Edited', and 'Versions'. The table lists 13 items, mostly related to 'Computers' from 1961 to 1969, with 'Advanced Telephone Systems', 'Computerization', and 'Cybernetics' at the bottom. At the bottom of the table, there are buttons for 'Select all', 'Delete selected', 'Add new page', and 'Import media'. A status message 'No items selected' is shown on the right.

Visible	Title	Description	Last Edited By	Date Edited	Versions
<input checked="" type="checkbox"/>	1961: Computers	New description	Curtis Fletcher	August 20th 2018	20
<input checked="" type="checkbox"/>	1962: Computers	No description	Curtis Fletcher	September 17th 2018	12
<input checked="" type="checkbox"/>	1963: Computers	No description	Curtis Fletcher	November 5th 2018	7
<input checked="" type="checkbox"/>	1964: Computers	No description	Curtis Fletcher	June 22nd 2018	5
<input checked="" type="checkbox"/>	1965: Computers	No description	Curtis Fletcher	July 19th 2018	3
<input checked="" type="checkbox"/>	1966: Computers	No description	Curtis Fletcher	July 19th 2018	3
<input checked="" type="checkbox"/>	1967: Computers	No description	Curtis Fletcher	July 19th 2018	3
<input checked="" type="checkbox"/>	1968: Computers	No description	Curtis Fletcher	July 19th 2018	3
<input checked="" type="checkbox"/>	1969: Computers	No description	Curtis Fletcher	July 19th 2018	3
<input checked="" type="checkbox"/>	Advanced Telephone Systems	No description	Curtis Fletcher	July 19th 2018	4
<input checked="" type="checkbox"/>	Computerization	No description	Curtis Fletcher	January 5th 2018	1
<input checked="" type="checkbox"/>	Cybernetics	No description	Curtis Fletcher	January 5th 2018	1

Content tab in Scalar's new Dashboard

Curtis Fletcher /

[About Scalar](#) | [User's Guide](#)

20th Cen. Technology Book for Dev Testing

Properties

Editorial

Styling

Content

Users

Utilities

Return to book »

Title

20th Cen. Technology Book for Dev Testing

Subtitle

Description

URL

http://scalar.usc.edu/dev/ test-book

Genre

Article

For cosmetic purposes only--will be displayed throughout the interface

Permissions

☒ No login required

☐ Can be found in Scalar index and by search engines

☐ Can be duplicated by you and others

☐ Only authors and editors can see past versions

Comments

☐ Automatically approve new comments

☐ Email authors when comments are added

☐ Enable Hypothes.is sidebar

Table of Contents

Add item

Publisher credit

Book Properties tab in Scalar's new Dashboard

SCALAR 2 USER'S GUIDE

WORKING WITH WIDGETS (3/6)

Map Widget

The **Map** widget will plot items in your scalar book on a Google Map. All items to be plotted must include *dcterms:coverage* or *dcterms:spatial* (either will work) metadata in the format decimal latitude, decimal longitude (which can be added using the 'Metadata' tab in the page editor). To learn more about adding geospatial metadata to items in your Scalar book, see the section on our [Google Map Layout](#).

To add a Map widget, click on either the linked or inline widget button in the WYSIWYG editor and then choose "Map" from the widget options. Next, use the content selector to choose an item or selection of items to be plotted on the map. One can choose individual items at will. One can also choose paths and tags and include the items they contain or tag, respectively, by ticking the box under "Include Children" for that item in the content selector.


Scalar's Map Widget

Scalar's new map widget will plot items in a Scalar book on a Google Map.

SCALAR 2 USER'S GUIDE


WORKING WITH WIDGETS (1/6)

Timeline Widget

The  Timeline widget will display content in your Scalar book chronologically via an interactive timeline. All items to be displayed must include *dcterms:temporal* or *dcterms:date* in the format *month, day, year, hour, minute, second* (which can be added using the 'Metadata' tab in the page editor). To learn more about adding temporal metadata to items in your Scalar book, see the section on our [Timeline Layout](#).

To add a Timeline widget, click on either the linked or inline widget button in the WYSIWYG editor and then choose "Timeline" from the widget options. Next, use the content selector to choose an item or selection of

the diversity of the US military by including a Caucasian, African American, and Latino American whose service branch is intentionally ambiguous. Together, they face the Wall of the fallen.




Scalar's new timeline widget will plot items in a Scalar book chronologically along an interactive timeline.

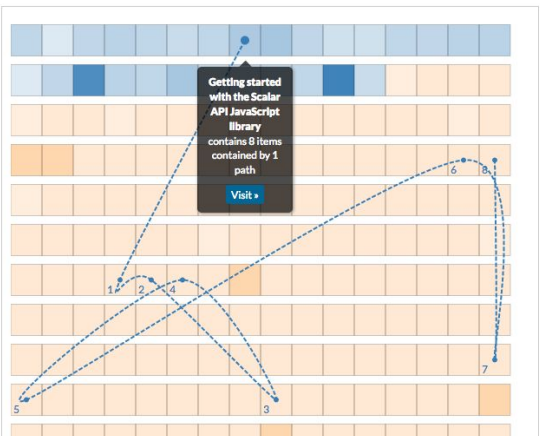
SCALAR 2 USER'S GUIDE

WORKING WITH WIDGETS (2/6)

Visualization Widgets

 Visualization widgets visually represent the contents and connections across an entire book in one of several interactive formats.

To add a Visualization widget, click on either the linked or inline widget button in the WYSIWYG editor and then choose "Visualization" from the widget options. Next, use the Visualization Options to determine the content, connections and format for the visualization. In the first dropdown menu, select the type of content to be displayed: "All pages," "All paths," "All tags," "All annotations," "All media," "All comments," and "This



Scalar's new visualization widgets represent the contents and connections across an entire book in one of several interactive formats.